

Application No. 10/727,517
Reply to Notice of Allowance of August 12, 2005

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Previously presented): A dynamic color mixing device comprising:

(a) at least one light emitting diode (LED) unit each including:

(a1) a first LED of a first color; and

(a2) a second LED of a second color;

(b) a controller configured to supply respective driving signals to each of said first LED and second LED individually, said respective driving signals individually controlling relative intensity outputs of said respective first LED and second LED, wherein said controller individually frequency modulates the respective driving signals supplied to each of said first LED and said second LED to individually control their relative intensity outputs,

(c) a temperature sensor configured to sense a temperature at at least a portion of said at least one LED unit, and

wherein said controller further monitors the sensed temperature of said at least one LED unit and integrates a current supplied to said at least one LED unit, and controls the frequency modulation based on the monitored temperature and integrated current.

Claim 2 (Original): A dynamic color mixing device according to claim 1, wherein said at least one LED unit further includes (a3) a third LED of a third color, and said controller is further configured to supply a respective driving signal to individually control a relative intensity output of said third LED.

Claims 3-7 (Canceled).

Application No. 10/727,517

Reply to Notice of Allowance of August 12, 2005

Claim 8 (Previously Presented): A dynamic color mixing device according to claim 1, wherein said controller is further configured to control said temperature sensor based on the monitored temperature and integrated current.

Claim 9 (Currently Amended): A dynamic color mixing device ~~according to claim 1,~~
comprising:

(a) at least one light emitting diode (LED) unit each including:

_____ (a1) a first LED of a first color; and

_____ (a2) a second LED of a second color;

(b) a controller configured to supply respective driving signals to each of said first LED and second LED individually, said respective driving signals individually controlling relative intensity outputs of said respective first LED and second LED;

wherein said at least one LED unit further includes (a3) a third LED of a third color, and said controller is further configured to supply a respective driving signal to individually control a relative intensity output of said third LED;

wherein said controller individually frequency modulates the respective driving signals supplied to each of said first LED, second LED, and third LED to individually control their relative intensity outputs and further amplitude modulates the respective driving signals supplied to each of said first LED, second LED, and third LED;

said dynamic color mixing device further comprising:

a color sensor array configured to sense colors of light output from at least a portion of said at least one LED unit; and

wherein said controller is further configured to control the frequency modulation based on the sensed colors.

Application No. 10/727,517

Reply to Notice of Allowance of August 12, 2005

Claim 10 (Original): A dynamic color mixing device according to claim 2, wherein said first LED is a red LED, said second LED is a green LED, and said third LED is a blue LED.

Claim 11 (Previously Presented): A dynamic color mixing device comprising:

(a) at least one light emitting diode (LED) unit each including:

(a1) a first LED of a first color; and

(a2) a second LED of a second color;

(b) means for supplying respective driving signals to each of said first LED and second LED individually, said respective driving signals individually controlling relative intensity outputs of said respective first LED and second LED, wherein said means for supplying further individually frequency modulates the respective driving signals supplied to each of said first LED and said second LED to individually control their relative intensity outputs;

(c) means for sensing a temperature at at least a portion of said at least one LED unit, and

wherein said means for supplying further monitors the sensed temperature of said at least one of LED unit and integrates a current supplied to said at least one LED unit, and controls the frequency modulation based on the monitored temperature and integrated current.

Claim 12 (Original): A dynamic color mixing device according to claim 11, wherein said at least one LED unit further includes (a3) a third LED of a third color, and said controller is further configured to supply a respective driving signal to individually control a relative intensity output of said third LED.

Application No. 10/727,517
Reply to Notice of Allowance of August 12, 2005

Claims 13-17 (Canceled).

Claim 18 (Previously Presented): A dynamic color mixing device according to claim 11, wherein said means for supplying further controls said means for sensing based on the monitored temperature and integrated current.

Claim 19 (Previously Presented): A dynamic color mixing device according to claim 11, further comprising:

means for sensing colors of light output from at least a portion of said at least one LED unit; and

wherein said means for supplying further controls the frequency modulation based on the sensed colors.

Claim 20 (Original): A dynamic color mixing device according to claim 12, wherein said first LED is a red LED, said second LED is a green LED, and said third LED is a blue LED.